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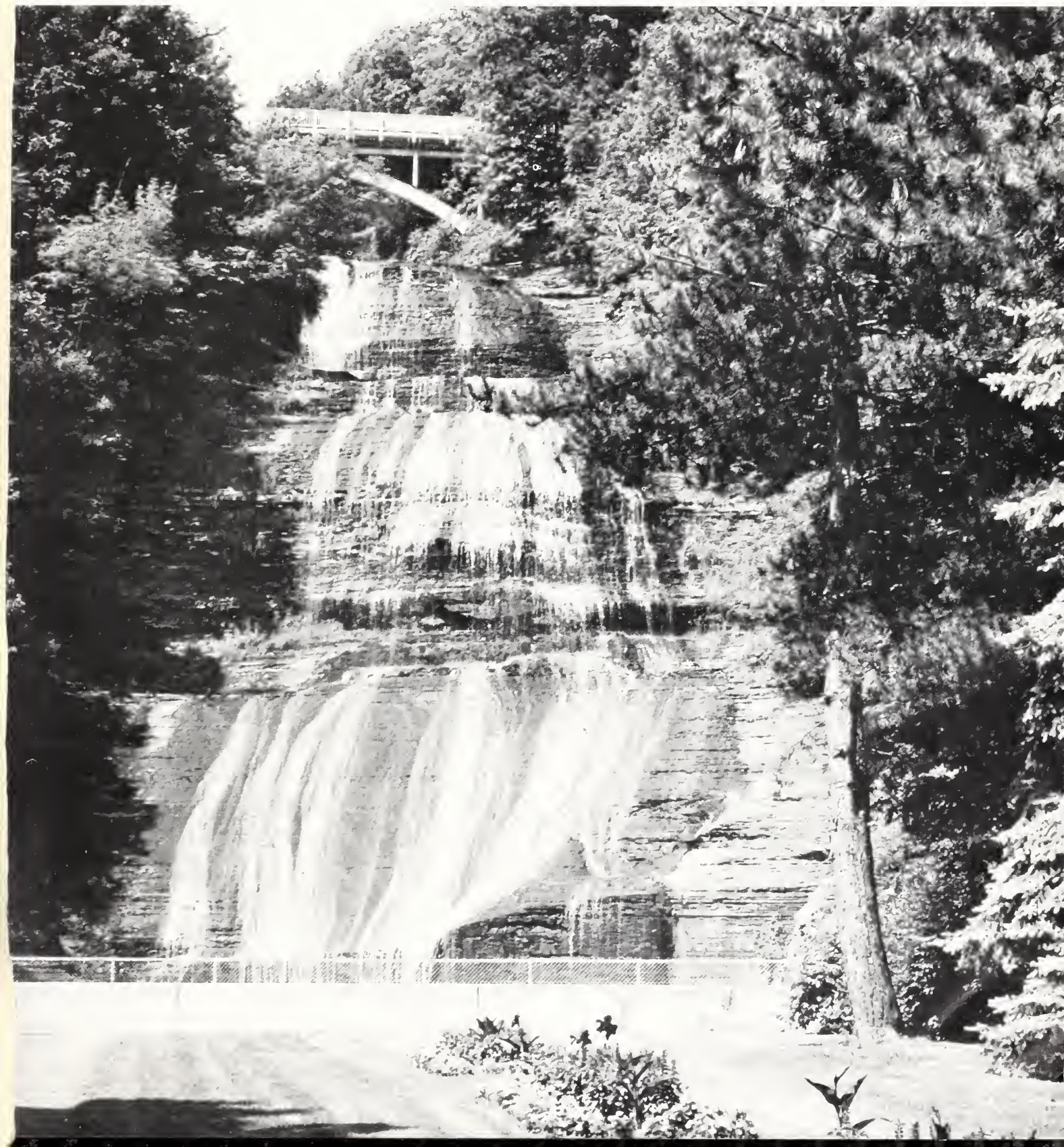
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Comments: From the SCS Chief

Farmers Want the Facts

Most farmers know that soil erosion eventually cuts crop yields ... today, next season, or several years down the road. It also eventually brings higher fertilizer costs.

Many farmers also recognize that conservation tillage can maintain yields, or even increase them, and reduce operating costs while protecting the soil.

But we can't expect all farmers to adopt innovative conservation practices based on general knowledge. Like my fellow Missourians, they say, "show me."

Many farmers know what ought to be done; what they need are motivation and research information. They need research information they can apply to their particular farm and still stay in business.

In addition, some concerned groups are raising questions about the use of herbicides and placement of fertilizer in conservation tillage and no-till. We need research to answer questions and provide facts in these areas.

I have discussed major soil and water conservation research and education needs with administrators of the Agricultural Research Service (ARS), Cooperative State Research Service, Economic Research Service, Extension Service, and Forest Service.

Their response has been outstanding, especially their action on two of the highest priorities—soil erosion and productivity relationships, and conservation tillage systems.

Scientists are working on at least 34 research projects in 22 States on how soil erosion affects productivity. Almost every State agricultural experiment station and ARS research laboratory is conducting research on various aspects of conservation tillage.

Our goal is reliable information on how different conservation production systems can be applied to a wide range of soils and landscapes in different climates. Farmers then will be better equipped to make important conservation decisions, for their resources and the Nation's.



Cover: Montour Falls in Schuyler County, N.Y., is one of the stops on a soils tour put together by the Cooperative Extension Service at Cornell University, Ithaca, N.Y. See article on page 10 and other Management Tips beginning on page 6

John R. Block
Secretary of Agriculture

Peter C. Myers, Chief
Soil Conservation Service

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Editor, Judith E. Ladd

Associate Editor, Nancy M. Garlitz

Assistant Editor, Donald L. Comis

Editorial Assistant, Ann P. Serota

Design Consultant, Christopher Lozos

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News Briefs

More Land Protected From Soil Erosion

Soil erosion affected fewer acres in 1982 than in 1977, and conservation practices protected more acres from erosion in 1982 than in 1977, according to Secretary of Agriculture John R. Block.

Block said the 127-page report of preliminary data from the 1982 National Resources Inventory recently issued by the Soil Conservation Service also showed:

- The average annual rate of soil erosion on cultivated cropland dropped from 5.1 tons per acre to 4.8 tons per acre.
- Sheet, rill, and wind erosion on 56 percent of the cropland was at or below tolerable limits. These lands accounted for 15 percent of all soil erosion on cropland nationwide.

"The National Resources Inventory we have just completed was the most exhaustive and extensive survey the U.S. Department of Agriculture has ever made of where our use of soil and water is taking us," Block said. "It is encouraging to see that while there is much work still to be done in certain areas of the country, nationwide we are seeing a general improvement."

The report also showed the acreage classified as urban and built-up land was 46.6 million acres in 1982, compared to 64.7 million acres reported in 1977. The 1977 estimate thus appears to have been markedly overstated. The 1982 data, which correlate closely with data from the 1980 U.S. Census of Population, are considered accurate because of the availability of better maps, more time for data collection, many more sample points, and better quality control. The 1977 and 1982 data will be further analyzed to learn causes of the discrepancy. Analysis also will attempt to determine the rates of conversion to urban and built-up land between 1977 and 1982.

The acreage of cropland increased from 413 million acres to 421 million

acres, just under 2 percent. Of this 8-million-acre increase, nearly half was on land highly susceptible to erosion and of marginal value for crops.

"This tends to support our concerns that significant plow-outs of grasslands may be occurring in several States," Block said.

The report contains national data on land use and cover, average annual erosion, conservation treatment needs, potential cropland, prime farmland, forest cover, and other natural resource conditions as of summer 1982.

Peter C. Myers, chief of the Soil Conservation Service, said the agency will further analyze the inventory data this spring and summer and then publish the final statistical report. He said all estimates are preliminary and subject to change, but that no major changes are expected.

Data from the 1977 National Resources Inventory are comparable to data from the 1982 inventory, Myers said, except where changes in definitions and inventory procedures affected the data. The 1982 inventory used more than five times as many sample points to estimate resource conditions and therefore is accurate for much smaller geographic areas.

Conservation District Runs Onfarm Tillage Demonstration

Crawford County Soil and Water Conservation District (SWCD) directors in southeastern Illinois are renting a 53-acre farm to show that no-till is profitable.

Jane Ruholl, the resource conservationist for the Crawford County SWCD, says no-till will have to be used on many acres in the county to reduce erosion below the tolerance level ("T" value). T value is the average annual tons per acre soil loss a given soil may experience and still maintain its productivity over an extended period of time.

In 1982, the Crawford County SWCD, along with the other 97 SWCD's in Illi-

nois, adopted the State's voluntary Sediment and Erosion Control Guidelines, which became effective January 1, 1983.

The guidelines call for a phased reduction in the erosion rate so that by 1988 all farmland with a slope of 5 percent or less will have an erosion rate at or below the T value. By 2000, all Illinois farmland should be at that level.

Stanley Miller, the chairman of the Crawford County SWCD, says the board of directors thought it "would be easier to assure compliance if some short-term financial benefits to soil conservation could be seen by area farmers." In 1982, they signed a 5-year lease for a farm in a critical soil loss area of Crawford County and began the tillage demonstration. The directors farm the land themselves with their own equipment, as they would their own farms, to make the study realistic. The Soil Conservation Service provides technical assistance.

They use a typical corn-soybean rotation on a field of about 20 acres, using no-till, minimum tillage, and conventional tillage. The Crawford County extension agent uses another 10 acres to test different varieties of no-till corn and soybeans. Several chemical companies use another 10 acres to test numerous combinations of herbicides with no-till corn and soybeans.

Ruholl says the SWCD directors, with help from a State wildlife biologist, also have planted a mixture of grain sorghum, corn, and millet to feed wildlife. A State forester uses a poor timber stand on the farm to demonstrate the need for timber stand improvement.

Many people, from Crawford County and surrounding counties, tour the farm, including Future Farmers of America, bankers, and farmers.

The T value for the test plots is 4 tons of soil per acre per year. SCS estimates erosion on this field with conventional tillage is 11 tons per acre per year. Minimum tillage reduces this erosion to 6 tons per acre per year and no-till brings it below the T value, to 3 tons per acre per year.

Entering their third year of the test, the SWCD directors are hoping this year will

be a more normal year, after having suffered heavy insect damage and a severe drought in the first 2 years.

Last year the Crawford County SWCD began a no-till drill rental program to encourage farmers to plant soybeans without tillage.

Donald L. Combs,
assistant editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

Collectors' Item Planned by SCSA to Mark 50th Birthday

The Soil Conservation Society of America (SCSA) will mark the 50th anniversary of soil and water conservation with a souvenir folder of U.S. postage stamps reflecting the interests of SCSA members.

The inside front cover of the folder will contain the new 20-cent soil and water conservation stamp, with a "first-day" cancellation. On the facing page will be five historic postage stamps, cancelled with a one-of-a-kind pictorial postmark created by Chris Lozos, Soil Conservation Service graphic designer.

"There is a great deal of interest among philatelists in pictorial cancellations, and this one should add to the value of this souvenir folder in the years

ahead," said Walt Peechatka, SCSA executive vice president.

The cluster of five stamps commemorates soil conservation (1959), water conservation (1960), forest conservation (1958), range conservation (1961), and wildlife conservation (1970). The special cancellation includes the words "Legacy of the Land," and the date and place of issue at SCSA's 39th annual meeting in Oklahoma City, Okla.

The number of souvenir folders, each in its own envelope, will be limited to 2,250, with the number of each folder inscribed on its cover. Folders will be given as long as they last to persons who request them and who make a \$10, tax-deductible donation to SCSA. Part of the proceeds will go to the Hugh Hammond Bennett Endowment named for the first Chief of the Soil Conservation Service.

Requests should be addressed to SCSA, 7515 N.E. Ankeny Road, Ankeny, Iowa 50021. Folders will be delivered at the Oklahoma meeting, July 29-August 1, 1984.

The pictorial cancellation will also be applied during the SCSA meeting to envelopes bearing the 20-cent soil and water conservation stamp at a temporary post office in the lobby of the headquarters hotel.

Conservation Tillage Used on Almost One-Third of U.S. Cropland

A national survey shows the percentage of acres planted with conservation tillage rose from 24 percent in 1982 to 31 percent in 1983.

The survey, the second by the Conservation Tillage Information Center (CTIC), shows that conservation tillage was used on nearly 87 of the 228 million acres planted last year.

In 1982, conservation tillage was used on 94 of 392 million acres planted. The CTIC says the reduction in conservation tillage acres in 1983 is mainly due to the drop in total acres planted and a more restrictive definition of conservation tillage. The 1983 CTIC survey used 30 percent residue cover on the soil surface after planting as a minimum requirement for conservation tillage.

Nationally, the actual number of acres planted with no-till, the type of conservation tillage that leaves the most surface residue, stayed about the same—slightly more than 10 million acres. This and the 7-percent increase in conservation tillage acres, despite the changes in 1983, encourage CTIC analysts.

Illinois is the top no-till State in the Nation with more than 1 million no-till acres and Kansas leads in total conservation tillage, with 10.4 million acres. In terms of percentages, Delaware leads with conservation tillage on 72 percent of its planted acres.

In terms of crops, corn farmers lead, using conservation tillage on 40 percent of the corn acres. Farmers used conservation tillage on 37 percent of the grain sorghum acres, 34 percent of the small grain acres, and 29 percent of full season soybean acres.

In addition to the planted acres, farmers used conservation tillage on 31 percent of the cropland left fallow in 1983.

Copies of the executive summary of the survey, "The 1983 National Survey of Conservation Tillage Practices," are available free from the CTIC Field Office, 2010 Inwood Drive, Executive Park, Fort Wayne, Ind. 46815. For a fee, CTIC will



develop custom reports by county. There is also a charge for the full report.

The CTIC began operating on January 1, 1983. The National Association of Conservation Districts administers it in cooperation with private industry and government agencies. For more information, call Jim Lake or Bruce Julian at (219) 426-6642.

Donald L. Combs,
assistant editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

Conservation District Survey Shows Conservation Tillage Farmers Doubled

A Conservation Tillage Information Center (CTIC) survey of member conservation districts shows the average number of conservation tillage farmers per district more than doubled in the past 5 years.

CTIC sent a questionnaire to 900 conservation districts to see the local viewpoints and activities behind the conservation tillage acreage reported in annual CTIC surveys. The survey was completed in cooperation with U.S. Department of Agriculture agencies.

The districts say the most important reasons farmers are switching to conservation tillage are net profit, fuel savings, fewer trips across the field, erosion control, and conserving soil moisture. They say weed control is the main obstacle to adoption of conservation tillage and therefore the greatest research need. After weed control, they list finances, attitudes, and equipment, in that order, as additional obstacles. For research needs, they follow weed control with economics, yields, and equipment.

That may explain why equipment rental is the third most common incentive for the adoption of conservation tillage, after cost sharing and demonstrations.

The increase in numbers of conservation tillage farmers is matched by a rise in activities supporting conservation tillage, mostly in the past 3 years.

On the average, each district held three conservation tillage meetings in

1983, compared to two the year before. Most districts say conservation tillage topics draw the largest crowds to district meetings.

The survey may show higher than normal conservation tillage activity because questionnaires were sent to the first conservation districts that joined CTIC. The results come from the 732 district boards who answered the questions.

A 20-page report, "Conservation Tillage: Local Action and Views," gives national and regional summaries of the responses. CTIC members who returned questionnaires can request free copies. Others wanting the survey should contact the CTIC Field Office, 2010 Inwood Drive, Executive Park, Fort Wayne, Ind. 46815.

Donald L. Combs,
assistant editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

National Endowment for Soil and Water Conservation Launches Foreign Exchange Program

The National Endowment for Soil and Water Conservation, under a grant from Communicating for Agriculture, Inc.—a Minnesota-based farm organization—is sponsoring the first agricultural foreign exchange program to focus on soil and water conservation.

On March 5, Iowa's Governor Terry Branstad announced that Iowa was chosen as the pilot State for the program, to coincide with Iowa's 1984 Year of the Soil program. Six Iowans between the ages of 19 and 28 will go to Denmark this June to live and work with conservation farm families for 6 months.

Communicating for Agriculture provided a grant to the National Endowment to develop the program and is giving scholarships that cover 25 percent of the Iowans' costs.

Michael Caughlin, Jr., the corporate secretary for the National Endowment, says 14 people applied for the program by the deadline, March 31. Caughlin says

he learned that the pilot project's schedule was too compressed and the next time he will allot at least 120 days from the time applications are invited to the trip date. "But the fact that 14 applied in so short a time shows how interested people are in the international aspects of conservation."

Caughlin, who has a Ph.D. in agricultural economics and has worked and studied abroad, says the idea for the exchange program began when he learned from Milt Smedsrud, the chairman of Communicating for Agriculture, that many European exchange students in America were telling farmers that some of their countries' soil and water conservation techniques were more effective than their hosts'. The American farmers asked Smedsrud for information about these techniques and he and Caughlin found there is no organized way to get it.

Caughlin says that farmers have tilled the soil in countries such as Denmark "for centuries and there's a good chance that we may have something to learn from their experience. The Endowment decided a person-to-person exchange was the best way to learn about conservation practices in other countries."

The International Agricultural Exchange Association (IAEA), which has more than 20 years of experience with exchange programs, worked with the Danish government to choose the host families and is handling travel arrangements and a 1-week orientation program in Denmark. IAEA will also provide supervision for the Iowans.

The Endowment expects to expand the program nationwide. For information about an exchange program in your State, write to the National Endowment for Soil and Water Conservation, 318 Fourth Street, N.E., Washington, D.C. 20002.

Donald L. Combs,
assistant editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

Getting Soil and Water Conservation on TV

"Lay a little public relations groundwork and the television broadcast media will be more likely to report on land and water resource problems and solutions."

This bit of advice comes from Phil Witt, anchorman for WDAF-TV 4, Kansas City, Mo., an advocate of the soil and water conservation movement.

Witt produced an award-winning news feature with help from Soil Conservation Service employees and conservation district board members representing the Mid-America Association of Conservation Districts (eight districts in the Kansas City, Mo., area). Titled "Vanishing Farmland," the five-part series presented issues, concerns, and solutions to land being lost because of development and erosion. It has been syndicated for use throughout the Nation.

Witt maintains that soil erosion, sedimentation, flooding, and land use issues not only are valid topics, but they are also "visually exciting for television." Therein, he says, lies the heart of resource conservation coverage.

"Soil and water conservation offers something extremely important to show society," said Witt, "and we are in the business of transmitting messages and quality images."

In laying the groundwork for working with a TV station, Witt recommends sim-

ply setting up an appointment and making yourself and interest known. "Don't hesitate to ask for time with the station manager (general manager), public affairs director, and, of course, the news director," advises Witt.

It is easier for the station to coordinate resource reporting through one person, so select a key individual to attend the first meeting as "media coordinator." It could be an SCS employee or volunteer, a district employee, or district board member. Others interested in and working with soil and water conservation may be present, but definitely have the media coordinator present and serving as spokesperson.

"The important thing," advises Witt, "is to have a person who totally understands the makeup, program, and scope of the conservation story."

Although Witt has been reporting on conservation for years, he said he is always amazed to learn about another program, interest group, or professional society. "Face it, soil conservation is big ... land management is complex. When reporters are directed to a story which can lead to various issues or concerns, they always appreciate knowing potential followup contacts. A knowledgeable coordinator is indispensable."

As a rapport develops, it is also important to become acquainted with the news producers and assignment desk personnel. In fact, in larger stations, these are

the first contact people. The media coordinator should know them on a first-name basis. A dedicated conservation coordinator will make it known he or she is willing to be contacted at any time of the day or night.

"Many hot news stories need to be formulated before or after traditional working hours, as do talk shows or other features," said Witt. "Willingness to be available when needed will pay dividends."

SCS and districts can develop good relations through a media coordinator by:

- Approaching the station with something concrete and of high quality. If possible, strive for a local angle to the news piece.
- Giving new topics to the stations in a form easy to understand.
- Treating all stations equally. Do not favor one station, even if the others do not favor you.
- Responding to station requests for information, advice, or assistance cheerfully, quickly, and completely.
- Keeping a file of the "hot line" number for each station ... it may be necessary to use it.
- Developing a district media awards program. Always give recognition when it is due.

"The people aiming cameras, writing, editing, directing, and producing the signals for the screen can exert vast influence over the public and the decisions they make. Help the media include, from time to time, topics of soil, water, and related resources," said Witt.

Robert J. Brejcha,
resource conservationist, SCS, Independence, Mo.



Diane Reinhardt (right), SCS district conservationist for Jackson County, Mo., explains pasture and woodland management problems and solutions for TV reporter Jan Smith (left).

Local Support Assures Success of Erosion Control Campaign

When the El Dorado County, Calif., Board of Supervisors decided to introduce a grading ordinance to help control erosion, they called on the Soil Conservation Service for help.

"The board of supervisors asked us to help draft a grading ordinance and suggest ways to effectively present and implement it," said Phil Blake, former SCS soil conservationist at Placerville and now SCS district conservationist at Napa.

"We believe landowners, developers, and contractors are concerned about erosion," said Greg Boeger, El Dorado County Resource Conservation District (RCD) president. "Many just don't know how to install simple, effective erosion control practices."

Representatives from county agencies, SCS, the El Dorado County and Georgetown Divide RCD's, a local State forester, and private engineers developed an erosion control information campaign to introduce the new ordinance. The committee believed that a public aware of the problem and its solution would be more receptive to the ordinance and make it easier to enforce.

For a major part of the campaign, the county donated an area behind its government center where on-the-ground examples of erosion control plants and planting techniques could be demonstrated. Local individuals, contractors, suppliers, civic organizations, and agencies donated labor and materials valued at \$5,500.

"We were amazed at the number of people who were willing to donate to the effort," Blake said.

The self-guided tour of erosion control practices includes a trail system, numbered posts, and a tour pamphlet to guide visitors through plantings of 25 native and introduced trees and shrubs. Visitors are led along a slope seeded with numerous grasses and forbs. Stops also feature various planting and management techniques. Some plots were hand-seeded; others were hydroseeded. Drip

and sprinkler irrigation systems are demonstrated on shrub and tree plantings. A drip-watered plot shows the latest water conserving devices and seeded slopes demonstrate plants requiring no supplemental water. Using the tour pamphlet, visitors can select plants and planting methods best suited to their local soil type, elevation, and personal preferences.

Local Boy Scouts planted trees, earning conservation merit badges for the effort. People from the county's Weekend Offender Prisoner Program constructed the trails. Prisoners from the Growlersburg Conservation Camp carved and painted signs and marker posts. A California Conservation Corps crew hand-seeded slopes. Local contractors and suppliers donated bark for the trails, excelsior blankets to protect seed on slopes, and trenchers for the ditches into which donated irrigation systems were placed. Plants were supplied through the SCS plant materials center at Lockeford, Calif.

Without local people, El Dorado County's erosion control self-guided tour would not have become a reality.

Marilyn Gibson,
area information specialist, SCS,
Sacramento, Calif.

Students Use Conserving Soil to Teach Conservation

When Soil Conservation Service District Conservationist Robert Gotkowski visited Northern Illinois University in DeKalb for career day, geography students asked him how they could gain field experience in resource conservation.

Gotkowski suggested that the university students work with county schools in using a book of teaching materials published by SCS, *Conserving Soil*, to tell young people about soil and how to care for it.

In Spring 1983, two university students, Catriona Mortell and Ruth Ann Jacquette, gave presentations to 20 DeKalb County school district classes ranging from

grades 4 to 9. The classes looked at soil samples, discussed how people depend on soil for many things, and viewed a slide show prepared by Mortell and Jacquette on soil erosion and how it can be solved on the farm and in town.

This spring semester, two more geography students from the university, Steve Skinner and Jon Hughes, took a soil conservation program to about 25 classes from grades 4 through 12. Skinner and Hughes also prepared a slide show on soil formation and soil erosion problems and solutions.

The DeKalb County Soil and Water Conservation District sends a newsletter to county teachers telling them when the university students will be available. Teachers then invite them to present their soil conservation program.

The Northern Illinois students earn 3 hours of course credit for their work. The soil and water conservation district receives many letters from teachers saying how the program built strong interest in soil conservation in their students.

David Coburn,
program coordinator, DeKalb County Soil and
Water Conservation District, DeKalb, Ill.

Mapping Soils on Three Wheels

Soil Conservation Service soil survey parties are using three-wheeled all-terrain cycles in mapping remote areas of western and northern Maine.

SCS soil scientists saw a need for the all-terrain vehicles as they completed mapping in the more populated parts of the State and began moving into remote areas of Oxford, Franklin, and Hancock Counties.

The vehicles enable soil scientists to travel logging roads and skid trails more safely and quickly to reach remote work sites. This leaves them more time to spend on mapping and should help SCS to meet its goal of completing the soil survey effort in Maine before the year 2000.

Dave Popp,
soil scientist, SCS, South Paris, Maine

Rock and Wooden Spillways Control Erosion, Cost Less

In spring 1982, dairy farmer Joe Bower of Clinton County, Mich., and Soil Conservation Service District Conservationist Jim Squires looked at the edge of a cornfield where water dropped about 3 feet from a drainage pipe into an open ditch.

The water would eventually cause severe gully erosion unless something was done to lower it safely. Normally Squires would recommend a concrete spillway, but he wanted to try something much cheaper and Bower agreed. They designed a wooden spillway, which Bower and his sons built after Bud Belcher, the SCS State conservation engineer for Michigan, approved the design.

The Bowers used posts and planks to build a wooden box below the drainage pipe. They lined the bottom of the box with rocks to break the impact of the falling water. They also added railings to prevent accidents.

Squires and other SCS personnel in Clinton County are trying many different types of spillways. For example, they have designed rock chute spillways, adapting SCS-approved designs used in Wisconsin and Ohio for several years.

These rock spillways, also approved by Belcher, simply use a rock-covered earthen ramp instead of a concrete spillway to lower the water from fields to ditches. Farmers built this type of spillway in the early days of conservation work and now the high cost of concrete work is causing a return to use of rock for spillways. SCS has helped Clinton County farmers install about 20 rock spillways in the past few years.

Squires says both the rock and the wooden spillways are working well and offer farmers ways to control erosion at one-third the cost of a concrete spillway. The rock spillways take more space than the wooden ones, but they are easier to build and cheaper, where rocks are available.

Squires noticed that farmers tend to keep a closer eye on the rock spillways than the concrete ones. He says one reason is that every time their plows uncover

a rock they add it to the spillway.

Emeron Christensen, the SCS assistant State conservation engineer for Michigan, says another advantage of rock spillways is their flexibility. If there is channel erosion downstream from the spillway, the rocks move into place or farmers can rearrange them. There isn't much farmers can do to adjust a concrete spillway. Christensen and Belcher will evaluate the spillways to see how they work over the next few years. If they prove successful, Clinton County may save money by using them instead of concrete spillways wherever needed along their 900 miles of county ditches.

The Clinton County Soil Conservation District (SCD) chose Bower their Outstanding Farmer of the Year for 1983. In the past 4 years, he has built two concrete spillways as well as the trial wooden one. The spillways are part of his overall conservation plan, designed with SCS help, which includes grassed waterways, crop rotations, and conservation tillage.

The U.S. Department of Agriculture's Agricultural Stabilization and Conservation Service (ASCS) paid part of the costs for all the spillways and grassed waterways. Squires says the Clinton County ASCS committee places a priority on erosion control and conservation tillage and shares much of the credit for the spread of such practices in the county. For example, ASCS paid part of the costs for more than half of the rock spillways in the county.

Donald L. Combs,
assistant editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

Guide Matches Plants to Soils

Anyone in Tarrant and Johnson Counties, Tex., who wants to plant a tree, shrub, ground cover, or vine can now consult tailor-made lists of plants and the soils in which they grow best. The lists are helping land users select the best plants for residential, commercial, and farmstead uses.

Phil Delucchi, Soil Conservation Service landscape architect at the South National Technical Center (SNTC) in Ft. Worth, Tex., masterminded the Soil-Plant Adaptation Guides. He worked with DeWayne Williams, SCS soil scientist at the SNTC; the SCS district conservationists for Tarrant and Johnson Counties, J. W. McDonald and J. D. Ballard; and Marty Baker, an Extension Service horticulturist.

To use the guides, land users must refer to the SCS soil survey for their county to tell what soil occurs where they will be planting. With the map symbol, soil name, and percent of slope, users can find which of nine soil groups their location is in. The soils are grouped according to slope, texture, pH, depth, drainage, permeability, and available water capacity.

The lists of suitable plants for each soil group give the common and scientific name for each plant; its rating for use in landscaping; its need for sun, shade, or part shade; its expected height and spread at maturity; the best planting method; and its growth rate. The lists range from two to five pages. For one group of soils, more than 150 plants are listed.

"Some soil scientists don't like to group soils," said Delucchi, "but most plants can adapt to the slight differences between soils in each group."

"The guides are making people more aware of the differences among soils and helping them to select the plant materials that best meet their needs. Using the guides will save them time and money."

Land users can obtain the Soil-Plant Adaptation Guide and soil survey information for Tarrant County at the SCS Ft. Worth field office and for Johnson County at the Cleburne field office.

Nancy M. Garlitz,
associate editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

The Neighbor-to-Neighbor Approach to Improved Woodland Management

Thousands of acres of prime timberland are unmanaged or poorly managed. This is true because many woodland ownerships are too small to be managed as businesses. In Oregon alone, private landowners have some 3.6 million acres in small nonindustrial forests that average under 150 acres per owner; this is almost 15 percent of the State's total forestland. How this land is managed could make the difference between a 22-percent decrease or a 14-percent increase in the State's timber harvests over the next 30 years.

In an effort to effectively reach this group with a dwindling professional staff, Don Carr, a Soil Conservation Service forester, and Rick Fletcher, County Extension Service forester, developed a Master Woodland Manager program. This program is a pilot project to improve the management of Oregon's small woodlands. It uses the principles of the Extension Service's Master Gardener program, in which volunteers receive training and in return donate an equal amount of time, sharing that knowledge with others.

In the first group 11 selected volunteers, all small woodland owners or managers in Linn and Benton Counties, are being given more than 80 hours of college-level training in the classroom and in the field in all aspects of small woodland management, from timber stand improvement to management planning and salesmanship. This is important, since what works for industry won't always work for the small operator because of the economics involved. Each participant will also be helped to develop a management plan on his or her own property. Neal Bell of Scio, one of the program participants, says, "The most important part is that information is being presented on a level that I can understand." Like many of the small woodland owners that he will be dealing with, he has a lot of practical knowledge about woodland management but no technical background.

The project is being sponsored by the Linn Soil and Water Conservation District (SWCD), who applied for and received a Soil and Water Resources Conservation Act (RCA) grant from SCS in fall 1982. According to the grant agreement, SCS will provide \$20,000 in RCA funds and the SWCD will provide \$7,000 in administrative support.

The committee overseeing this project includes a variety of cooperating agencies, including SCS, Cooperative Extension Service, Linn and Benton SWCD's, Oregon Department of Fish and Wildlife, Oregon Department of Forestry, USDA's Agricultural Stabilization and Conservation Service, private woodland owners, forestry consultants, and the forest products industry.

When the training is complete, the 11 volunteers will donate an equal amount of their time selling the benefits of good woodland management to their neighbors. They will conduct small woodland clinics and tours, encourage sound woodland management by personal contact with other woodland owners, and assist local agency foresters in spreading forest management information. It is hoped that in this way sound forest management theories can travel faster and further, and foresters can expect to keep the benefit of one-on-one contacts without overburdening the available professional help.

Jim McClinton, SCS staff forester, says, "I'm confident that the neighbor-to-neighbor approach in selling improved forest management will pay off! Many more than just the original 11 volunteers will benefit from this training."

Katherine Davenport,
former soil conservationist, SCS, Albany, Oreg.

A Guide to Prevent Rural Road Erosion

Rural landowners in California's Mendocino County do not welcome the annual rainy season. They have to drive home over slick, muddy roads, which are often made more hazardous by landslides and swollen creeks. Private dirt and gravel roads suffer increased erosion, and landowners are faced with the increasing cost of repair.

The Mendocino County Resource Conservation District (RCD) has developed an aid to reduce this rainy season problem. They have published a book for landowners called "Road Building Guide for Small Private Roads" that has suggestions for maintenance, drainage, and erosion control.

The book is the result of numerous requests from landowners with road problems, according to Dick Jacobsen, chairman of the Mendocino County RCD. It was written with the rural dweller in mind. In nontechnical terms the reader is taken through the necessary steps from "Do You Need a Road" to a "County Permit for Encroachment."

The 73-page book is full of ideas, illustrations, and solutions to common road problems. Landowners can use the book to determine the size, location, and construction details of a planned road, Jacobsen said. There is also advice on sizing culverts, cutting slopes, and tending ditches, he noted.

The success of "Road Building Guide for Small Private Roads," first published in October 1982, has resulted in a fourth printing. Requests for the publication have been received from throughout California and other Western States. Copies of the book are available for \$2.85 from Mendocino County Resource Conservation District, 405 Orchard Avenue, Ukiah, Calif. 95482.

Jan Urdzik,
public affairs specialist, SCS, Santa Rosa, Calif.

John F. Plain,
public affairs specialist, SCS, Davis, Calif.

People Are Touring the Soils in New York

People tour historical buildings, battlefields, movie stars' houses, foreign cities, discount shopping centers, and more. But how many people tour soils?

A growing number of people in New York State are. They are using soils tour guide leaflets published by the Cooperative Extension Service (CES) at Cornell University, Ithaca, to learn about their local soils.

Over the last 5 years, CES has published soil tour guides for 22 counties that have soil surveys published by the Soil Conservation Service. The soil surveys are made in cooperation with State agricultural experiment stations and other Federal and State agencies. The main purpose of the soils tours is to acquaint land use decisionmakers with the new soil survey for their county and the valuable information the survey contains.

The soils tour guide leaflets are 8½ by 11 inches and usually four to six pages. They generally list 5 to 11 sites for tour groups or individuals to observe; give directions to the sites; and discuss how the soils formed, how they occur on the landscape, and how they are limited for certain uses. Black and white photographs illustrate the leaflets, which include a reproduction of a soil survey map sheet referred to in the tour.

Soil and water conservation districts often sponsor soils tours with help from SCS district conservationists and CES county agents. On a typical soils tour, the

agencies who cooperated on the soil survey give an introductory presentation on how a soil survey is made and how it can be used. They also discuss specific landscape and soil characteristics of the county. The group then gets into buses or cars to tour the sites outlined in the leaflet.

Tour sponsors describe the landscape at each stop and relate it to the soil map. They discuss soil properties at roadcuts and other excavations and sometimes lead the group in testing the acidity of the soil.

The sponsors of soils tours adapt their programs to meet the special needs of groups of engineers, contractors, landscape architects, community planners, tax assessors, pedologists, conservationists, agronomists, geologists, or ground water experts.

Gerald W. Olson, who is with CES and is an associate professor of soil science in resource development in the agronomy department at Cornell University, oversees the publication of the soils tour guide leaflets. Said Olson, "Although the tours take much time and effort to plan and conduct, taking people to the object of study—the soils—is a most effective way to deliver the conservation message."

Olson and SCS have also worked with the Central Park Conservancy on producing a guide for a walking soils tour of Central Park in New York City. "Teachers in city schools can use the Central Park soils tour to help students learn geology, geography, soil science,

biology, and more," said Frederick L. Gilbert, SCS State soil scientist in Syracuse, N.Y.

A workbook of hands-on exercises, *Field Guide to Soils and the Environment*, written by Olson for learning about soil surveys and their applications, will soon be available. The workbook complements the textbook, *Soils and the Environment*, also written by Olson.

For more information contact Gerald W. Olson, 153 Emerson Hall, Agronomy Department, Cornell University, Ithaca, N.Y. 14853.

Nancy M. Garlitz,
associate editor, *Soil and Water Conservation News*, SCS, Washington, D.C.

Reaching a New Audience

A geology professor came up with an idea for the Soil Conservation Service to reach a new audience in South Texas. Harry Wagner, a professor at Victoria College in Victoria, Tex., and an SCS volunteer, suggested that SCS set up a booth at the South Texas Oil and Gas Show last October to show people in the petroleum industry how they could use soil survey information in their work.

SCS District Conservationist Ronnie Boston arranged for the booth, and Wagner, SCS Soil Scientists Wesley L. Miller, John Jacob, and Plinio Flores, along with SCS Area Range Conservationist James Alderson, set up the booth. Victoria College geology students helped them staff the booth.

They explained that SCS, through the soil and water conservation district, can help with such problems as reclaiming lands disturbed by oil and gas activities, locating pipelines to avoid gravelly and rocky soils, selecting salt-tolerant plants for cover, determining acidity of soils to reduce corrosion of pipelines, and controlling erosion along a creek where a pipeline enters the bank.

More than 500 people visited the booth during the 3-day show.

Alfred Vander Stucken,
area conservationist, SCS, Victoria, Tex.



On the soils tour of Westchester County, N.Y., tour goers learn that land-use patterns in the county are changing rapidly as the population moves north away from the cities. This farm is destined to be threatened by urban expansion.

New Publications

Beyond the Urban Fringe

Edited by Rutherford H. Platt and George Macinko

This volume is the result of a conference of professional geographers and researchers held in 1980 in College Park, Md. The publication includes papers which deal with the dramatic changes in nonmetropolitan America and problems that have arisen as urban America imposes ever-increasing demands on its hinterland.

Because the authors of this book are from a wide range of disciplines—such as geography, economics, rural sociology, planning, law, and physics—they are able to present the reader with a broad spectrum of research on problems of land use in nonmetropolitan areas. Helpful drawings, photos, and tables also give the reader valuable insight.

Beyond the Urban Fringe is available for \$39.50 from the University of Minnesota Press, 2037 University Avenue, S.E., Minneapolis, Minn. 55414. Price to the Association of American Geographers (AAG) members is \$25 if ordered from AAG Central Office, 1710 16th Street, N.W., Washington, D.C. 20009.

Agricultural Management and Water Quality

Edited by Frank W. Schaller and George W. Bailey

This book consists of a collection of papers presented at the National Conference on Agricultural Management and Water Quality held at Iowa State University. The papers focus on the effect of modern agricultural practices and chemical use on water entering lakes, streams, and rivers as runoff.

The book is divided into five sections: (1) overview and issues of agricultural nonpoint source pollution; (2) agricultural nonpoint sources and pollutant processes; (3) predicting pollutant loads and water quality impacts; (4) agricultural Best Management Practices—evalu-

ation, selection, and implementation; and (5) policy issues, trends, and summary.

This book can be used as a reference by teachers, researchers, and agencies who have responsibility for water quality and nonpoint source pollution control.

Copies of this 472-page book may be purchased by sending \$39.95, plus \$1 for shipping and handling, to Iowa State University Press, 2121 South State Ave., Ames, Iowa 50010.

Productivity Effects of Cropland Erosion in the United States

by Pierre R. Crosson with Anthony T. Stout

Because there is much controversy surrounding the effects of erosion on the productivity of American cropland, the authors of this research paper found it necessary to create a better understanding of the erosion threat to the Nation's capacity to meet future demands for crop production cost. In light of the authors' purpose, this study may be thought of as the first systematic appraisal of the effects of erosion in the United States on productivity of the soil and on the costs of producing crops.

In their appraisal, the authors propose an alternative standard based on the proposition that soil and other agricultural resources should be managed so that future generations will not have to pay more to produce food and fiber than we do now.

The material presented should be taken as a progress report on research under way at Resources for the Future on erosion and its consequences for the resource base. The study provides valuable information to soil conservationists who directly work with farmers.

The 118-page study is available for \$11 from the Johns Hopkins University Press, Charles and 34th Streets, Baltimore, Md. 21218.

Seeding Grassland Ranges

by Alastair McLean and A. H. Bawtree

The primary purpose of this short, yet highly informative, pamphlet is to educate livestock producers and range managers on how they can increase forage production, balance the yearly forage supply, and increase profits in their operations by seeding grasslands.

The pamphlet is also concerned with the overall restoration of depleted ranges and supports the basic assumption that the only practical way to revive depleted ranges is by seeding to grass. Some of the sections found in the publication include a description of the grasslands region and information on when to seed, how to seed, and what to seed.

All of the information outlined in the pamphlet is based on research and observations made by the British Columbia Ministry of Agriculture and Food.

To order *Seeding Grassland Ranges*, write to Publications Office, Ministry of Agriculture and Food, Parliament Building, Victoria, B.C., Canada V8W 2Z7.

Fundamentals of No-Till Farming

by the American Association for Vocational Instructional Materials

Fundamentals of No-Till Farming is a colorful, 148-page book designed in hopes of passing on to young farmers and future farmers information from nearly 20 years of no-till research, development, and practical experience.

Useful and educational chapters, such as understanding the no-till concept, determining no-till benefits and challenges, determining which no-till cropping system to use, and getting started in no-till farming, provide farmers with a storehouse of knowledge concerning this innovative and different approach to the basic task of planting and tending crops.

In addition to material on no-tillage, the book is also filled with how-to information on site selection, planting, fertilization, weed and insect control, and economic factors. Metric conversion tables, field map symbols, and acreage formulas are located at the end of the book to further assist farmers.

The publication is available for \$12.95 per copy, plus \$2 for postage and handling, from the American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, Athens, Ga. 30602.

Advances in Infiltration

by the American Society of Agricultural Engineers

This book consists of papers presented at the National Conference on Advances in Infiltration held in 1983 in Chicago, Ill. Throughout the publication emphasis has been placed on presenting significant developments over the last decade in the art and science of measuring and modeling the movement of water into the soil. Topics covered include infiltration physics, parameters in infiltration equations, infiltration measurements, applications in watershed hydrology, and applications in irrigated and dryland agriculture.

In addition to the 36 papers presented in this book, there are also 23 poster session conference abstracts which provide valuable infiltration information not commonly available in one source.

The 385-page book can be ordered by sending \$27.50 (\$23 for ASAE members) to the American Society of Agricultural Engineers, Dept. 1418, 2950 Niles Road, St. Joseph, Mich. 49085-6959.

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Meetings

July	14-17	American Association of Nurserymen, San Antonio, Tex.
	22-26	National Federation of Business and Professional Women's Clubs, Nashville, Tenn.
	29-Aug. 1	Soil Conservation Society of America, Oklahoma City, Okla.
August	4-8	National Farm & Power Equipment Dealers Association, Montreal, Quebec, Canada
	5-8	American Agricultural Economics Association, Ithaca, N.Y.
	5-8	Society of American Foresters, Quebec City, Quebec, Canada
	11-16	American Fisheries Society, Ithaca, N.Y.
	12-16	Association of State and Interstate Water Pollution Control Administrators, Lake Lanier, Ga.
September	8-12	International Association of Fish and Wildlife Agencies, Juneau, Alaska
	16-18	World Fertilizer Conference, San Francisco, Calif.
	19-21	National Waterways Conference, Nashville, Tenn.
	30-Oct. 4	Water Pollution Control Federation, New Orleans, La.
October	1-5	American Society of Civil Engineers, San Francisco, Calif.
	3-5	Conservation Tillage: Strategies for the Future Conference, Nashville, Tenn.
	3-5	Hardwood Plywood Manufacturers Association, Monterey, Calif.
	21-25	International Irrigation Exposition and Conference, Kansas City, Mo.
	31-Nov. 4	American Horticultural Society, San Antonio, Tex.
November	5-8	Geological Society of America, Reno, Nev.
	8-10	Future Farmers of America, Kansas City, Mo.
	8-11	National Association of Biology Teachers, West Lafayette, Ind.
	9-14	National Association of State Universities and Land Grant Colleges, Denver, Colo.
	12-18	National Grange, Portland, Maine
	13-16	National Forest Products Association, Palm Beach, Fla.
	25-30	American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, Las Vegas, Nev.
December	2-5	American Society of Farm Managers and Rural Appraisers, Orlando, Fla.
	4-6	National Farmers Organization, Las Vegas, Nev.
	4-6	Western Forestry and Conservation Association, Sacramento, Calif.
	6	Keep America Beautiful, Inc., Washington, D.C.
	8-12	American Association of State Highway and Transportation Officials, New Orleans, La.
	11-14	American Society of Agricultural Engineers, New Orleans, La.